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(54) **Method for producing (meth)acrylic acid**

(57) An object of this invention is to provide a method for producing acrylic acid that enables to suppress adverse influence of byproducts during distillation and to accomplish long-term continuous operation of the acrylic acid production apparatus. This invention is directed to a method for producing (meth)acrylic acid comprising the step of isolating (meth)acrylic acid from

a liquid containing (meth)acrylic acid by distillation wherein the liquid contains glyoxal (including its hydrate) in a concentration of 0.1 mass% or less. This is accomplished by separating glyoxal from said liquid by reverse osmosis.

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EUROPEAN SEARCH REPORT

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EP 02 01 9890

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	EP 1 041 062 A (NIPPON CATALYTIC CHEM IND) 4 October 2000 (2000-10-04) * page 3, line 57 *	1	C07C57/07
X	EP 0 085 898 A (DOW CHEMICAL CO) 17 August 1983 (1983-08-17) * page 1, line 13 *	1	
X	LAUFENBERG, G.: "Selektivität und Stofftransport bei der Reversosmose organisch-wässriger Mehrkomponentensysteme" 1997, VDI VERLAG, DÜSSELDORF XP002228003 * page 36 - page 91; table 3.11 *	2,3	
A	PATENT ABSTRACTS OF JAPAN vol. 011, no. 317 (C-452), 15 October 1987 (1987-10-15) & JP 62 106043 A (MITSUI TOATSU CHEM INC;OTHERS: 02), 16 May 1987 (1987-05-16) * abstract *	2,3	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			C07C
The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 21 January 2003	Examiner Janus, S
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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The members are as contained in the European Patent Office EDP file on
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21-01-2003

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 1041062 A	04-10-2000	JP 2000290221 A	17-10-2000
		CN 1270952 A	25-10-2000
		EP 1041062 A2	04-10-2000
		ZA 200001377 A	06-09-2000
EP 0085898 A	17-08-1983	US 4358347 A	09-11-1982
		AU 566202 B2	15-10-1987
		AU 1037883 A	04-08-1983
		BR 8300321 A	25-10-1983
		CA 1190563 A1	16-07-1985
		DE 3360689 D1	10-10-1985
		EP 0085898 A1	17-08-1983
JP 62106043 A	16-05-1987	JP 1965645 C	25-08-1995
		JP 6094432 B	24-11-1994

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

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